STN:Search History Report

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(FILE 'HOME' ENTERED AT 13:16:32 ON 16 JUL 2008)

FILE 'MEDLINE, SCISEARCH, CAPLUS, BIOSIS' ENTERED AT 13:16:45 ON 16 JUL 2008

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L1         53881 S ALGINATE
L2        384506 S POROUS
L3        153738 S COVALENT
L4            10 S L1 (L) L2 (L) L3
L5             4 DUP REM L4 (6 DUPLICATES REMOVED)
L6          1281 S L1 (L) (POLYNUCLEOTIDE? NUCLEIC? OR DNA)
L7           516 S L6 AND PY<=1998
L8           213 DUP REM L7 (303 DUPLICATES REMOVED)
L9           213 FOCUS L8 1-
L10            9 S L9 AND POR?
L11         1024 S L1 (L) L2
L12          357 S L11 AND PY<=1998
L13            4 S L12 AND (NUCLEIC? OR GENE OR DNA OR POLYNUCLEOTIDE? OR PLASMI
                 E SHEA (L) LONNIE /AU
                 E SHEA LONNIE/AU
L14          178 S E4
                 E BONADIO JEFFREY/AU
L15          113 S E3
                 E MOONEY DAVID/AU
L16          504 S E6
L17          781 S L14 OR L15 OR L16
L18          433 DUP REM L17 (348 DUPLICATES REMOVED)
L19           93 S L18 AND L1
L20            6 S L19 AND L2
L21           38 S L11 AND GAS
L22           90 S L11 AND (GAS OR AIR OR BUB?)
L23           73 DUP REM L22 (17 DUPLICATES REMOVED)
L24           39 S L23 AND PY<=1998
L25            0 S L24 AND (NUCLEIC? OR GENE OR DNA OR POLYNUCLEOTIDE? OR PLASM
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L20 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2008 ACS on STN

TI Sustained dna delivery from structural porous matrices for gene therapy applications with special emphasis is on bone formation and regeneration

SO PCT Int. Appl., 144 pp.
CODEN: PIXXD2

IN Shea, Lonnie D.; Bonadido, Jeffrey; Mooney, David J.

AB Disclosed are particular 3-dimensional structural matrixes containing DNA and their use in the prolonged release of DNA in various biol. environments. The structural matrix is a porous polymer [PLGA]-based containing pores formed by gas foaming involving inert gases ($CO_2$) and leaching out of a water-soluble particulate (salt, NACL, sugar, glucose, sucrose, mannitol) when exposed to body fluids. The admixt. is compression molded into a selected size and shape prior to executing the gas foaming process. The structural matrix may also be an alginate or modified alginate matrix. This structural matrix is a biocompatible or biodegradable matrix. It may also be a lactic acid polymer, glycolic acid polymer or lactic acid/glycolic acid copolymer matrix. At least part of

this matrix may be comprised of lactic acid/glycolic acid (PLGA) copolymer matrix. The structural matrix may be modified where one side section is bonded to one cell interaction mol. such as cell adhesion mols., cell attachment peptides, proteoglycan attachment peptide sequences, proteoglycans, cell adhesion polysaccharides, growth factors, cell adhesion enzymes, RGD peptide, fibronectin, vitronectin, Laminin A, Laminin B1, Laminin B2, collagen 1 and thrombospondin. The DNA-matrix materials are created such that they maintain a defined space, allowing cellular migration, transfection and proliferation to occur in a controlled manner. Such DNA-containing structural matrixes are thus particularly useful in in vivo cell transfection and gene expression in the context of gene therapy. This may encode a protein for stimulating bone progenitors or wound healing in fibroblast or in tissue or organ regeneration or transplantation or an antigen for immunity or cytotoxic or apoptosis-inducing protein or a transcription factor or elongation factor or cell cycle control protein or kinase or phosphatase or DNA repair protein or oncogene or tumor suppressor or angiogenic protein or anti-angiogenic protein or immune response stimulating protein or cell surface receptor or accessory signaling mol. or transport protein or anti-bacterial or anti-viral protein or hormone or neurotransmitter or growth factor or growth factor receptor or interferon or interleukin or chemokine or cytokine or colony stimulating factor or chemotactic factor protein of growth hormone or parathyroid hormone or PTH1-34 polypeptide or bone morphogenic protein or BMP-2A or BMP-2B or BMP-3 or BMP-4 or BMP-5 or BMP-6 or BMP-7 or BMP-8 or TGF-α or TGF-β1 or TGF-β2 or latent TGFβ binding protein or activin/inhibin protein or FGF or GMCSF or EGF or PDGF or insulin-like growth factor or leukemia inhibitory factor. This method allows for the use in gene transfer to cells within a tissue site and in manufacture of a medicament for gene therapy. Implantable medical devices comprising this gene-matrix are described. The release of nucleic acids from the matrix is controlled by diffusion. This method also applies to cancer therapy or treating viral infection.

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9958656 | A2 | 19991118 | WO 1999-US10330 | 19990512 |
| | WO 9958656 | A3 | 20000106 | | |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BJ, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9938986 | A | 19991129 | AU 1999-38986 | 19990512 |